

Markus EICKMANN *et al*
VARICELLA ZOSTER VIRUS (VZV)
IMMUNOREACTIVE PROTEIN VP26
AND ITS DIAGNOSTIC USE
 38137-0018

Figure 1(a)

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ATGACACAACCCGCATCGTCTCGTGTAGTCTTTGATCCAGCAACCCACCACATTTTCG
1  -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 60
TACTGTGTITGGCGTAGCAGAGCACATCAGAACTAGGGTCGTGGGGTGGTGTAAAAGC
MetThrGlnProAlaSerSerArgValValPheAspProSerAsnProThrThrPheSer
M T Q P A S S R V V F D P S N P T T P S

GTGGAAGCAATTGCGGCTTACACCCCGTTGCTTTAATAGACTTTTAAACGCCAGTGG
61  -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 120
CACCTTCGTTAACCGCAATGTGGGGCAACGAAATTATGCTGAAAATTTCGGTCACCT
ValGluAlaIleAlaAlaTyrThrProValAlaLeuIleArgLeuLeuAsnAlaSerGly
V E A I A A Y T P V A L I R L L N A S G

CCTTTGCAACCTGGTCACCGTGTGGACATCGCTGATGCCAGAAGCATTTACACCGTGGGA
121 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 180
GGAAACGTTGGACCACTGGCACACCTGTAGCGACTACGGTCTTCTGTAATGTGGCACCT
ProLeuGlnProGlyHisArgValAspIleAlaAspAlaArgSerIleTyrThrValGly
P L Q P G H R V D I A D A R S I Y T V G

GCCGCGGCCAGTGCCGCGGTGCAGCGCTAACCATAATGCAATACGATACGCCGAACG
181 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 240
CGCGCGCGGTACCGCGCGCACGTGGCGGATTGGTATTACGTTTATGCTATGCGGCTTGC
AlaAlaAlaSerAlaAlaArgAlaArgAlaAsnHisAsnAlaAsnThrIleArgArgThr
A A A S A A R A R A N H N A N T I R R T

GCCATGTTTCCGAGACTGACCCATGACATGGTTAAGACCAACGGTTGGCTTAAAACGT
241 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 300
CGGTACAAACGGCTCTGACTGGGATACTGTACCAATTCTGGTTGCCAACCGAATTTGCA
AlaMetPheAlaGluThrAspProMetThrTrpLeuArgProThrValGlyLeuLysArg
A M F A E T D P M T N L R P T V G L K R

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Figure 1(b)

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ACGTTTAACCCGCGTATTATACGACCACACCCCAATCCATCCATGAGTTTGGGAATC
301 -----+-----+-----+-----+-----+-----+-----+-----+-----+ 360
TGCATAATTGGGCGCATATAATGCTGCTGTTGGGGGTTTAGGTAGGTACTCAAACCCCTTAG
ThrPheAsnProArgIleIleArgProGlnProProAsnProSerMetSerLeuGlyIle
T P N P R I I R P Q P P N P S M S L G I

TCGGGGCCTACTATATTGCCGCAAAAAACACAGAGCGCGGATCAGTCTGCTTTACAACAG
361 -----+-----+-----+-----+-----+-----+-----+-----+-----+ 420
AGCCCGCGGATGATATAACGGCGTTTTITGTGTCTCGCGGCTAGTCAGACGAAATGTTGTC
SerGlyProThrIleLeuProGlnLysThrGlnSerAlaAspGlnSerAlaLeuGlnGln
S G P T I L P Q K T Q S A D Q S A L Q Q

CCCCCGCGGTTGGCGTTTTTGGGATCATCCCCGCAACCCCCCACCTCAAACGACGTCG
421 -----+-----+-----+-----+-----+-----+-----+-----+-----+ 480
GGGCGCGCGCAACCGCAAAAGCCCTAGTAGGGCGGTTGTGGGGGTTGGAGTTTGTCTGCAGC
ProAlaAlaLeuAlaPheSerGlySerSerProGlnHisProProProGlnThrThrSer
P A A L A F S G S S P Q H P P P Q T T S

GCATCCGTTGGACAACAGCAACAGTGGTGTGGGGTCTTCTGGACAACACCGCAACAG
481 -----+-----+-----+-----+-----+-----+-----+-----+-----+ 540
CGTAGGCAACCTGTTGCTGTTGTCACCAAGCCCCAGAACCTGTTGTTGGCGTTGTC
AlaSerValGlyGlnGlnGlnHisValValSerGlySerSerGlyGlnGlnProGlnGln
A S V G Q Q Q H V V S G S S G Q Q P Q Q

GGASCACAGTCAAGCACTGTCCAGCCAACAACCGGATCACCGCCCGCGGCCCAAGGCGTG
541 -----+-----+-----+-----+-----+-----+-----+-----+-----+ 600
CCTCGTGTCACTTGTGACAGGTGGTGTGTTGGCCTAGTGGCGGGCGCCGGTTCCGCAC
GlyAlaGlnSerSerThrValGlnProThrThrGlySerProProAlaAlaGlnGlyVal
G A Q S S T V Q P T T G S P P A A Q G V
  
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Figure 1(c)

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CCACAGTCTTACCCCGCCCCCAACCMAAATACCCCCAGGGGGGTAAAGGGACAGACCTTG
601 -----+-----+-----+-----+-----+-----+-----+
GGTGTTCAGATGGGGCGGGGGTTGGGTTTATGGGGGGTCCCCCATTCCTGTCTGGAAC
ProGlnSerThrProProProThrGlnAsnThrProGlnGlyGlyLysGlyGlnThrLeu
P; Q S T P P P T Q N T P Q G G K G Q T L

TCACACAGGGACAATCTGGAACGGCTTCAAGAAGTCGTAGGGTG
661 -----+-----+-----+-----+-----+-----+-----+ 705
AGTGTGTGCCCTGTATAGACCTTTGGGAAGTCTCTCAGCATCCAC
SerHisThrGlyGlnSerGlyAsnAlaSerArgSerArgArgVal
S H T G Q S G N A S R S R R V

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Figure 2

Met Thr Gln Pro Ala Ser Ser Arg Val Val Phe Asp Pro Ser Asn Pro
Thr Thr Phe Ser Val Glu Ala Ile Ala Ala Tyr Thr Pro Val Ala Leu
Ile Arg Leu Leu Asn Ala Ser Gly Pro Leu Gln Pro Gly His Arg Val
Asp Ile Ala Asp Ala Arg Ser Ile Tyr Thr Val Gly Ala Ala Ala Ser
Ala Ala Arg Ala Arg Ala Asn His Asn Ala Asn Thr Ile Arg Arg Thr
Ala Met Phe Ala Glu Thr Asp Pro Met Thr Trp Leu Arg Pro Thr Val
Gly Leu Lys Arg Thr Phe Asn Pro Arg Ile Ile Arg Pro Gln Pro Pro
Asn Pro Ser Met Ser Leu Gly Ile Ser Gly Pro Thr Ile Leu Pro Gln
Lys Thr Gln Ser Ala Asp Gln Ser Ala Leu Gln Gln Pro Ala Ala Leu
Ala Phe Ser Gly Ser Ser Pro Gln His Pro Pro Pro Gln Thr Thr Ser
Ala Ser Val Gly Gln Gln Gln His Val Val Ser Gly Ser Ser Gly Gln
Gln Pro Gln Gln Gly Ala Gln Ser Ser Thr Val Gln Pro Thr Thr Gly
Ser Pro Pro Ala Ala Gln Gly Val Pro Gln Ser Thr Pro Pro Pro Thr
Gln Asn Thr Pro Gln Gly Gly Lys Gly Gln Thr Leu Ser His Thr Gly
Gln Ser Gly Asn Ala Ser Arg Ser Arg Arg Val #

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Figure 3

No.	Status	ELISA	ELISA	ELISA	No.	Status	ELISA	ELISA	ELISA
		IgM	IgM	IgM			IgM	IgM	IgM
		Reference	pMal- VP26* 1 µg/ml	pQE- VP26* 1 µg/ml			Reference	pMal- VP26* 1 µg/ml	pQE- VP26* 1 µg/ml
		Conj. 1:50	Conj. 1:50	Conj. 1:25			Conj. 1:50	Conj. 1:50	Conj. 1:25
		Serum 1:42	Serum 1:168	Serum 1:168			Serum 1:42	Serum 1:168	Serum 1:168
1	-	11	86	62	29	-	16	19	104
2	-	22	38	100	30	-	8	13	44
3	-	16	31	72	31	-	3	23	47
4	-	57	23	88	32	-	50	23	101
5	+	133	399	88	33	-	9	32	117
6	-	0	161	118	34	+	250	187	204
7	-	10	28	77	35	+	291	1079	470
8	-	47	45	60	36	-	26	52	44
9	-	7	16	63	37	+	139	66	123
10	+	132	173	160	38	-	38	87	49
11	-	71	117	70	39	-	26	25	40
12	-	0	32	75	40	-	49	13	63
13	-	17	75	66	41	-	5	20	34
14	-	11	16	57	42	-	27	43	80
15	-	23	27	73	43	-	51	49	161
16	-	11	27	59	44	-	8	38	100
17	+	979	1720	532	45	-	21	38	133
18	-	9	18	44	46	-	10	33	82
19	-	34	30	71	47	-	29	18	35
20	+	293	630	215	48	-	30	66	97
21	+	126	139	259	49	-	21	35	97
22	-	61	277	169	50	-	56	64	82
23	+	292	808	154	51	-	5	40	56
24	+	581	98	115	52	-	97	55	37
25	+	321	821	304	53	-	2	19	35
26	+	509	519	375	54	-	31	21	39
27	+	298	>2500	694					
28	-	29	36	29					

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Figure 4

No.	Status	ELISA	ELISA	ELISA	No.	Status	ELISA	ELISA	ELISA
		IgG	IgG	IgG			IgG	IgG	IgG
		Reference	pMal VP26* 1 µg/ml	pQE VP26* 2 µg/ml			Reference	pMal VP26* 1 µg/ml	pQE VP26* 2 µg/ml
		Conj. 1:50	Conj. 1:50	Conj. 1:50			Conj. 1:50	Conj. 1:50	Conj. 1:50
		Serum 1:231	Serum 1:100	Serum 1:100			Serum 1:231	Serum 1:100	Serum 1:100
1	+	1014	176	137	28	+	549	89	172
2	+	302	87	356	29	-	34	87	120
3	+	642	97	314	30	-	76	55	128
4	+	612	87	0	31	-	0	38	101
5	+	1383	181	215	32	-	41	94	116
6	+	930	132	118	33	-	8	147	177
7	+	653	39	145	34	+	1315	860	340
8	+	915	47	469	35	+	1629	282	187
9	+	570	23	220	36	+	469	218	287
10	+	1770	131	253	37	+	693	181	346
11	+	990	104	76	38	+	1449	296	169
12	+	698	227	335	39	+	1139	85	193
13	+	141	62	501	40	+	1509	64	118
14	+	338	39	44	41	+	457	110	159
15	+	556	113	246	42	+	343	304	545
16	+	791	45	423	43	+	1455	511	244
17	+	2982	264	258	44	+	1030	174	245
18	+	1205	192	295	45	+	528	50	184
19	+	694	80	100	46	+	510	161	353
20	+	1143	270	340	47	+	300	94	290
21	+	1405	377	256	48	+	490	91	157
22	+	539	42	72	49	+	888	348	277
23	+	2449	533	530	50	+	1301	83	195
24	+	1923	1117	620	51	+	704	247	139
25	+	1420	95	54	52	+	2523	2325	757
26	Primary +	1194	277	66	53	+	447	99	153
27	Zoster +	2087	341	204	54	+	848	149	167

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SEQUENCE LISTING

(i) APPLICANT:

- (ii) TITLE OF INVENTION: Immunreaktives Protein VP26 des Varicella-Zoster-Virus (VZV) und seine diagnostische Verwendung

(iv) COMPUTER READABLE FORM.

- (v) CURRENT APPLICATION DATA.

(2) INFORMATION FOR SEQ ID NO 1

(A) LENGTH: 235 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS:
(D) TOPOLOGY: linear

(iii) HYPOTHETICAL. YES

(A) ORGANISM: Varicella-Zoster-Virus
(B) STRAIN: Ellen

(B) CLONE: VP26

(B) MAP POSITION: ORF23

Met Thr Gln Pro Ala Ser Ser Arg Val Val Phe Asp Pro Ser Asn Pro